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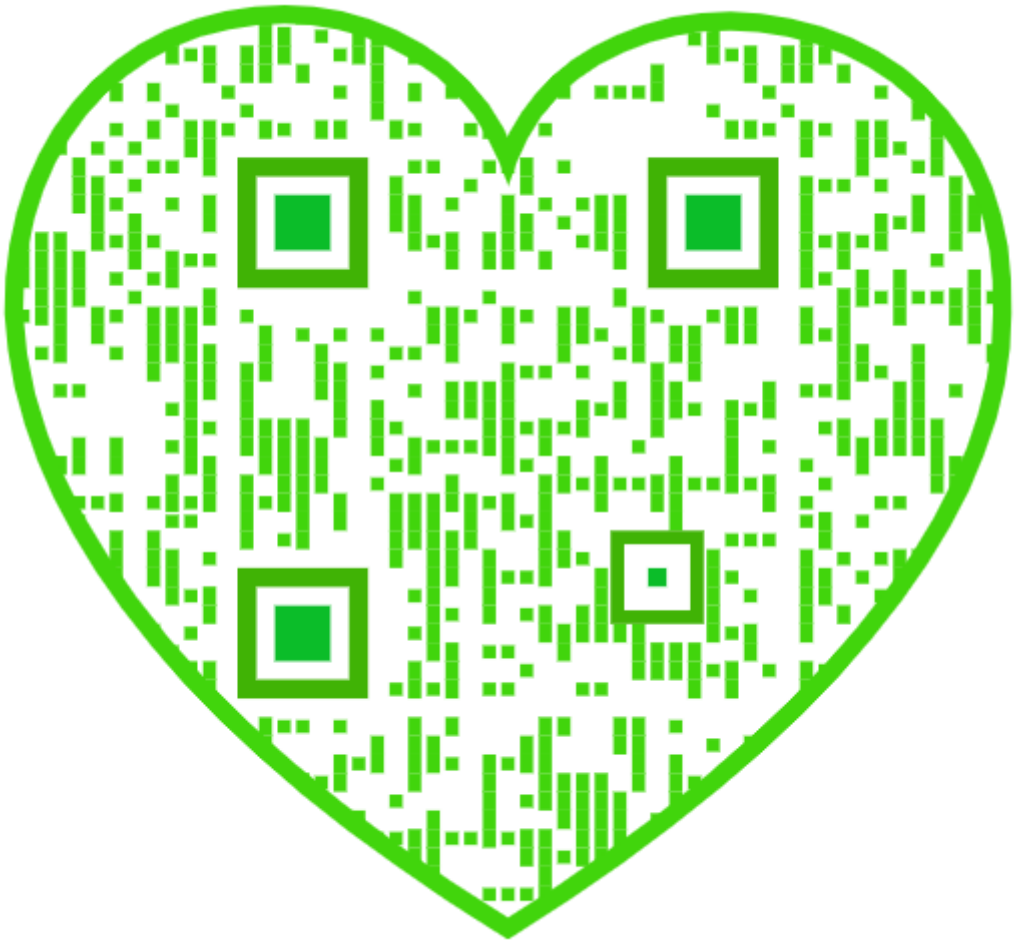

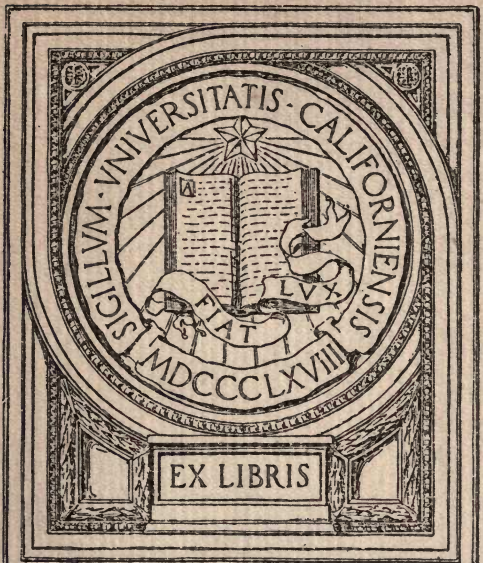
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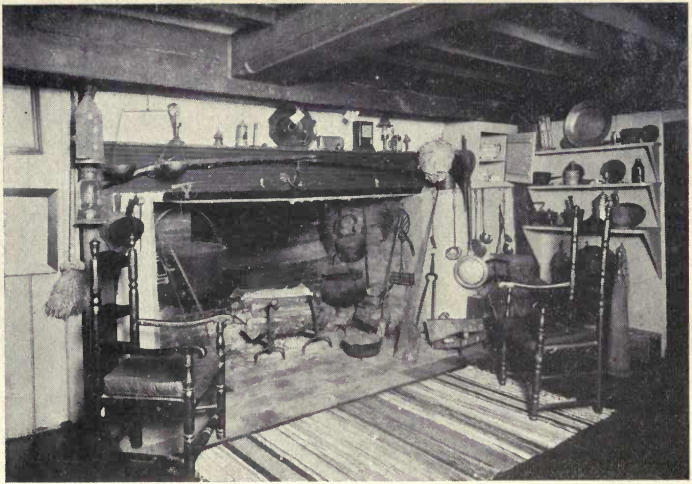
THE

HOUSE & GARDEN

MAKING

BOOKS

IT is the intention of the publishers to make this series of little volumes, of which *Making a Fireplace* is one, a complete library of authoritative and well illustrated handbooks dealing with the activities of the home-maker and amateur gardener. Text, pictures and diagrams will, in each respective book, aim to make perfectly clear the possibility of having, and the means of having, some of the more important features of a modern country or suburban home. Among the titles already issued or planned for early publication are the following: *Making a Rose Garden; Making a Lawn; Making a Tennis Court; Making a Water Garden; Making Paths and Driveways; Making a Poultry House; Making a Garden with Hotbed and Coldframe; Making Built-in Furniture; Making a Rock Garden; Making a Garden to Bloom this Year; Making a Garden of Perennials; Making the Grounds Attractive with Shrubbery; Making a Bulb Garden, Making a Garage, Making and Furnishing Outdoor Rooms and Porches;* with others to be announced later.



The fireplace of long ago, made large enough to accommodate most of the kitchen's pots and pans beside the fire

MAKING A FIREPLACE

By HENRY H. SAYLOR

AUTHOR OF

BUNGALOWS, MAKING A ROSE GARDEN, ETC.

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INTRODUCTION

In a book of this kind there is no particular need for dwelling at length on the desirability of having a fireplace. That will be taken for granted. It is enough to say that in these days a home can scarcely be considered worthy of the name if it does not contain at least one hearth. There is some inexplicable quality in a wood fire that exerts almost a hypnotic influence upon those who eagerly gather about it. The smoldering glow of the logs induces a calm and introspective mood that banishes all the trivialities and distractions of the day's work and gives one an opportunity to replenish his store of energy for the coming day.

The open fire, unlike most of the comforts that we demand in a modern home,

has been associated with the race as far back almost as the home itself. At first, of course, it was as a necessity and the development from that to a luxury has been an exceedingly slow one extending over the years down to the present time.

There are two forms of the open fire — a possible third one, the gas log, being a subject on which the less said the better. We have, therefore, a choice between the open fireplace designed for wood and the basket grate in which to burn coal, preferably cannel coal. This latter fuel is not nearly so well known in this country as in England where the scarcity of wood necessarily makes coal the more commonly used fuel. With our own abundance of wood, however, there will perhaps be little hesitancy in choosing the open fireplace rather than the basket grate for coal, although in certain cases,

for example an apartment where the flue has been built too small, or in a house where an available chimney offers only a small flue area for fireplace use, the basket grate will prove a welcome solution of the problem. Of course there is no excuse whatever for building a modern home with a chimney too small for the sort of fireplace you want, but where the chimney has already been built without this provision it may possibly be found that a small terra cotta flue lining may be inserted in the larger flue without seriously damaging the latter's power of draft. In that event the addition of a basket grate fireplace to an old house would be an interesting possibility.

However fully we may appreciate the desirability of some sort of fireplace, there seems to be a rather widespread impression that the attainment is largely a

matter of chance. Too many home-builders have instructed their architects to provide a fireplace or two in the fond hope that the matter was then practically closed — a mere matter of time until they might be sitting before the fire's cheerful glow. Too frequently the result has been a disappointment when the first few trials introduced into the room more smoke than heat or cheer. The reason for this is that there is a scientific basis for fireplace building which is frequently ignored absolutely by an over-confident and stupid mason. Where the work of building the home has been entrusted to an architect's hands the latter usually appreciates the fact that the building of the fireplaces is liable more than any other part of the house to be taken into the mason's own hands with, if he is not watched, disastrous results. Undoubtedly every mason

One of the best forms of the basket grate in brass. The splayed sides send out more heat

A modern English fire corner. Facing and hearth have been worked out in a rather startling contrast of tiles

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would resent most strongly any insinuation as to his lack of knowledge regarding fireplace construction. Each mason not only thinks that he knows how a fireplace should be built, but it is almost as general a rule that he feels that his particular method is the only correct one.

In view of this it might be well for any man building his own home to give some attention to the matter of his fireplaces, to insist on knowing how they are designed and to follow their construction throughout so that there is no chance for a blunder; and this chance is not so slight as might be supposed. In a house in which the author had carefully shown every detail of construction in the drawings, it was found when the building was nearly completed that the cast-iron throat flues, which ordinarily prevent any possible mistake of construction on the ma-

son's part, had been put in reversed and it was necessary to tear down the whole face of the chimney breast in each case to replace them properly.

The matter of construction is not at all a complicated affair, as the next chapter will aim to show.

CONSTRUCTION

THE chief difficulty in attaining a successful fireplace design does not lie in securing an abundant draft. In fact it is an easy matter to make a fireplace draw if the flue is large enough and the opening from the fire chamber into the flue unobstructed. There will never be any question of getting a roaring blaze the moment the fire is lighted.

This is, in a way, the type of fireplace that our Colonial ancestors built — great cavernous openings and generous flues, with the result that the more wood was piled upon the blaze the more they blistered their toes and at the same time chilled their backs. For it is evident that when we secure such a strong, unob-

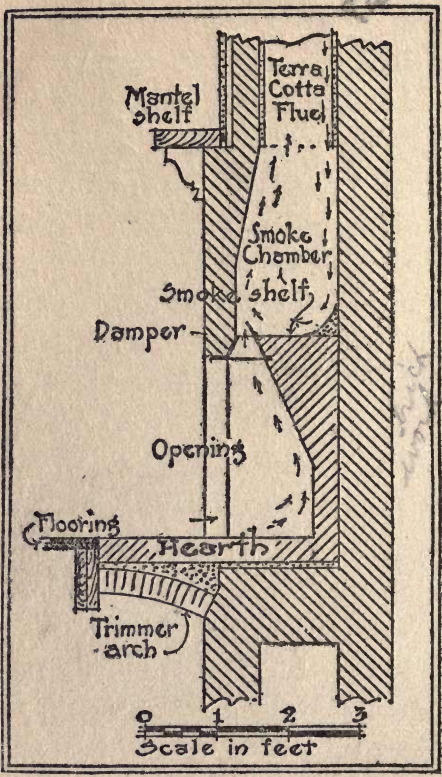
structed current of hot air up the chimney, enough cool air to take its place must be drawn into the room through every opening and crevice. The result is a mighty draft that rushes past those unfortunate enough to be sitting about the fire and carries rapidly up the chimney almost all of the heat of combustion.

In the fireplace of our Colonial ancestors probably ninety per cent. of the heat was entirely lost, being carried up the chimney. However, cord wood was then to be had for the cutting.

We want a different sort of a fire in these days—one that will burn with a steady, constant blaze or glow, conserving most of its heat, which the back and sides of the fire chamber will reflect out into the room.

Such a fireplace will not necessarily be a large one. It is amusing to hear how

universally the demand goes up for large fireplaces —" great big fellows that will burn full cord wood." It is hard to see just why this is. It may be based on the assumption that if a small fireplace is desirable a large one is more so. This is a fallacy that the architect and fireplace builder find it hard to dispel. There is no objection whatever to a large fireplace in a summer camp or informal shack of that sort. In fact a small one would in such a place be ridiculous, but when we come to our year-round living-room or dining-room or den, where the walls of the room are tight and the whole atmosphere quieter and more restrained, a large fireplace would be distinctly a disturbing element. Such a room as this, unless very poorly built, would not permit the in-take of sufficient air for the draft of a big fireplace, whereas in our



A section through the fireplace and chimney. The broad cross-hatching represents brickwork

slab cabin or log bungalow the conditions are quite different.

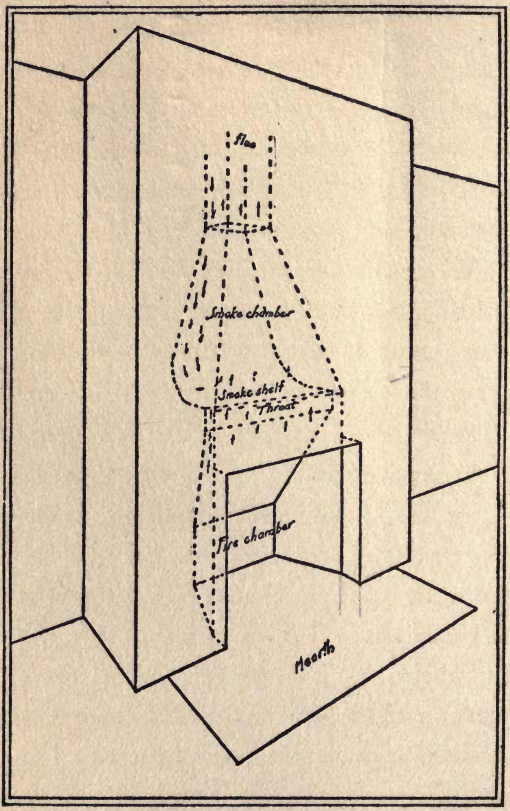
For the ordinary room, therefore, a fair average size for the fireplace opening is three feet in width by two and a half feet high, with a depth half the width. From such a fireplace it is possible to get a maximum of heat with a minimum of draft.

There are two vital principles that should be observed in the design of any fireplace. One of these is the relation between the size of the opening into the room and the size of the flue itself. A cross-section of the flue — which incidentally should be kept the same throughout its extent — should be one-tenth of the area of the opening into the room. The second vital consideration is the introduction of what are known as a "smoke shelf" and a "smoke chamber." The reason for constructing a fireplace

with these two features will appear more readily by reference to the diagram. This is drawn to show that when a fire is kindled on the hearth the warm air current, which is generated immediately, begins to rise through the throat (the opening between the fire chamber and the smoke chamber) and at once induces a down-draft of cold air. If the back of the fireplace were on the same continuous plane with the rear side of the chimney flue, this downward current of cold air would strike directly upon the fire itself and force smoke out into the room. The smoke shelf is built just where it will prevent this action. The sectional diagram does not perhaps make quite clear the shape of this smoke chamber, but the accompanying perspective outline sketch will indicate the fact that the throat and the smoke chamber at the bottom must

extend across the full width of the fire chamber. This width in the smoke chamber immediately diminishes in rising until it joins the flue at the flue's own area.

The sectional diagram indicates a cast-iron damper built in the throat. This is not necessary, for it contributes nothing to the efficiency of the fire itself. Its one great advantage is that by furnishing the mason with an unalterable form, it forces him to build the throat properly rather than in one of the wrong ways that his own judgment might dictate. Such a cast-iron damper also forms a support for the flat arch of brick over the opening if bricks are used. If the damper is not built in, it is necessary to use an iron supporting bar to carry this flat arch. Then too, in case the damper is not used, there is lost the advantage of being able



Perspective view of the fireplace, showing the shape of the various parts as built without a cast-iron throat damper

quite readily to close the throat entirely, which is highly desirable in the summer-time and frequently in the winter when the fireplace is acting too strenuously as a ventilator. If the cast-iron throat is not used, therefore, it will be well to lay an iron plate on the smoke shelf in such a way that it could be drawn forward across the opening to close it.

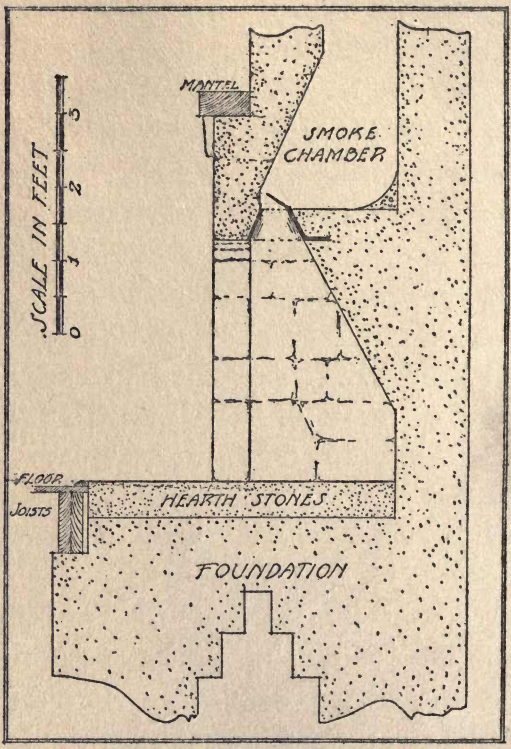
There are other types of dampers, most of them patented and all of them aiming to provide an adjustable opening in the throat in some way. One or two of these have a knob or handle projecting through the brickwork of the arch, permitting the convenient adjustment of the damper from outside. As a general principle, however, it is well to choose the simplest possible device that will secure the desired result.

The terra cotta flue lining which is

shown in the sectional diagram is not absolutely necessary, of course, as it is a rather modern introduction and unnumbered fireplaces have served their purpose without it. There is no question, however, regarding its worth, for it provides a flue with smooth, regular sides that will not clog nearly so readily as an ordinary brick flue. Besides that, it has the advantage of permitting a thinner wall for the chimney. It is dangerous to build a chimney with a single four-inch thickness of brick between the flue and whatever may adjoin the chimney. Of course no wood should be allowed to come within an inch or two of the brickwork in any event, but with a single thickness of brick, unlined, there is always the danger that the mortar will crumble from a joint and leave an opening through which it would be an easy mat-

ter for sparks or flame to do considerable damage. The introduction of a flue lining, however, into the chimney built in this way makes it entirely safe, provided the joints between sections of flue lining are carefully filled and made smooth with cement mortar.

The sectional diagram, it will be noticed, indicates a difference between the main back wall of the chimney, eight inches thick, and the brickwork laid inside the fire chamber to form the hearth and the back. The reason for this separation is that the rough brickwork of the chimney is always laid first as simply as possible, leaving the fire chamber with its sloping back and sides and the hearth to be filled in later with a better grade of brick or perhaps another kind. Frequently, also, tile will be combined with the brick finish as a hearth or facing.



A cross-section showing the construction of a large stone fireplace with slightly arched opening

A support for the hearth is usually obtained as indicated — by bringing what is called a "row-lock" or "trimmer" arch between the foundation masonry of the chimney and a pair of floor joists set out at the proper distance, depending upon the desired width of the hearth. While this is the customary method, occasionally a support is secured in some other way, such as corbeling out from the masonry foundation, or by extending two short projections of this masonry from the bottom up at either end of the hearth and throwing an arch across between these. Upon a bed of cement the hearth bricks themselves are laid, usually flush with the floor, although occasionally enough higher to permit a beveled molding strip to cover the joint between brick and floor more closely. In some cases the hearth itself is raised the full thickness

of a brick above the floor, as in one of the photographic illustrations shown.

The width of the hearth is ordinarily made about sixteen or eighteen inches beyond the face of the opening with the average size fireplace, twenty inches or even more with larger ones. This width should be increased, of course, if the opening is made considerably larger. The question of materials for the hearth and facing will be discussed in the next chapter.

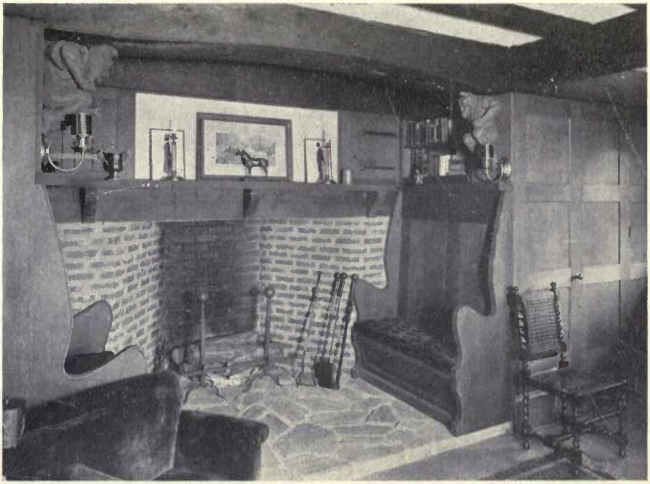
The chimney itself should extend at least a foot or two above any nearby roof ridge and it should work without any cowl, whirligig or other device of that type on the top. There is no great objection to having the opening a horizontal one at the top of the chimney, although in that case if the flue is nearly straight throughout its course, some rain will find its way down to the hearth in a hard

storm. In most cases there is enough bend in the flue to prevent this, and if not it may be avoided by covering the top of the chimney with a stone and having the openings vertical ones on all four sides just under this.

All of the brickwork throughout chimney and fireplace should be laid in first-class cement mortar which consists of one part Portland cement to three parts clean, sharp sand. Although lime mortar was used in all brickwork up to recent years, it is not durable, particularly in the vicinity of heat.

MISCELLANEOUS ODD FORMS

THERE are many unusual forms of fireplace with which we are not particularly concerned. For example, one sees occasionally an opening shaped like an inverted heart or like an ace of spades. It is possible to make a fireplace of this kind work satisfactorily, but it is by no means certain that this result can be accomplished at the first trial nor that the fire will continue to work properly under all conditions. It is safer always to adhere to the established type of rectangular opening, or to depart from this only to the extent of having the top an arch of large radius. Whenever the top is permitted to vary more than a slight extent from the horizontal there is the danger of



The inglenook seldom fails as a dispenser of home cheer. Frequently the seats are placed too close to the fire

having the smoke escape into the room at the top.

There is one other type that deserves special mention and that is the double fireplace, where two openings in adjacent rooms are served by a single flue between them. The only way in which this affects the two vital principles mentioned above is that the cross-section area of the flue should be one-tenth of the combined areas of the openings. The throat will in this case be in the middle of the chimney with the smoke shelf on either side of it. It is essential in a fireplace of this kind that there be no disturbing draft tending to pass through the opening from one room to the other.

Still another type which is even more rarely seen is the open fire in the middle of a room, such as may be desired occasionally in the lounging room of a large

club. Such an apparent anomaly could be secured by suspending a metal flue and hood from the roof, so that the lower edge of the truncated pyramidal form at the bottom would form the upper side of the fireplace "opening" at a convenient height above the hearth of brick, stone, tile or concrete. It is conceivable that an effective and thoroughly practical fireplace could be thus devised, having the flue and hood of wrought iron or copper, suspended and steadied by chains or bars from the ceiling and surrounding walls. In such a form the same principle of a fixed ratio between opening (here the entire perimeter of the hood multiplied by the distance above the hearth) and cross-section of flue would have to be observed, and here also it would be well to provide as fully as possible against the presence of disturbing drafts.

FACINGS AND MANTELS

THERE is not a particularly wide choice of materials available for the finish of the hearth and fireplace. Stone, brick, cement and tile exhaust the possibilities, although with combinations of these we have all the variety that we could wish.

Stone is suitable only in certain environments — the informal shack or log cabin chiefly, though of course it is impossible to make any hard and fast rule in the matter.

Brick is almost never out of place. Perhaps it is the association with the fireplaces that have been built by our fathers and grandfathers, or perhaps it is the inherent worth and fitness of the material

itself that puts it forward as a first choice. Undoubtedly the practical consideration that it is easier and more economical to build has something to do with the matter.

Concrete is a newcomer in the field of fireplace facing and as yet it cannot be said to have shown any particular reason why it should displace the other materials. With the ordinary heat developed in an open fire of wood there is no likelihood of cracking the concrete facing if the material has been properly mixed and applied, although there seems to be a vague impression that this might be a real danger. The color of concrete gives it no particular recommendation, for it is one that remains unchanged by fire, though not unstained by smoke. Brick, on the other hand, and tile, have the very closest possible association with fire in the mak-

Caen stone or its clever representation in cement serves well for the more formal type of mantel and facing

ing, which gives them a peculiar fitness for this purpose.

Tile, the last of the four materials, gives more latitude in design than any of the others, sometimes too much latitude we feel. If understandingly used, nothing could be more appropriate and attractive, but tile has been used so carelessly that somehow we have a feeling that the tiled fireplace is for show rather than for use. In any case, there is no question whatever regarding the unfitness of the glazed tiles which have made horrors of thousands of pseudo fireplace openings. It is only the mat-glazed or unglazed tiles that have any right to be used in such a place.

Since this little volume has for its subject the fireplace rather than the mantel, little need be said regarding the latter outward form, though there is no doubt

that a whole book on the subject might profitably be written. To touch upon the subject as lightly as space will permit, we can probably do no better than to suggest the obvious type of mantel for one or two of the more common architectural styles, and recommend that in other styles the architect be allowed sufficient latitude in design and expense to distinguish this important feature of hall, living-room, dining-room or library with the characteristics of the style he has worked out for the house itself.

The modern home along Colonial lines is perhaps the commonest problem, and incidentally the easiest, for the old models of delicately detailed white-painted wood mantels are so well known and so universally admired that modern reproductions along good lines and reasonable cost are easily obtained.

For the English plaster or half-timber house the architect will doubtless design a special mantel, in scale and in harmony with the dark paneling and other architectural woodwork, probably with a paneled over-mantel if the cost is not too rigorously held down.

In a house which breaks away from the historic architectural styles, as so many of the stucco buildings of the day do, the mantel treatment offers particularly interesting possibilities. Frequently the mantel is done away with entirely and the chimney breast treated independently as a whole.

With the very informal type of summer home where a rough stone for facing and chimney is employed, the mantel treatment can hardly be kept too simple and unobtrusive in its rugged strength. A heavy log, planed to a smooth top surface

and resting on two projecting stone brackets, is frequently used with good effect. The chimney breast may be stepped back at the shelf height to form a narrow stone ledge, or the breast left without any shelf. Many simple variations with the informal brick chimney breast will occur to everyone. In general, with these summer shacks or bungalows, the fireplace is the chief architectural feature of the living-room and for that reason will stand a moderate amount of embellishment, but this latter should take the form of a slightly better finish of the materials used throughout the room rather than the introduction of more elaborate and costly ones.

A fireplace and chimney breast of field stone, chosen with care and laid with more than average skill

MENDING POOR FIREPLACES

IT is well enough to say just how a fireplace should be built so that it will work satisfactorily, but that does not go far in helping the man who has a fireplace that will not work. Frequently it is possible without any very great expense and trouble to correct a fireplace that has been improperly built. If one has in mind a clear comprehension of the few elementary principles of fireplace construction it will usually be an easy matter to determine the reason why a fireplace smokes or fails to draw.

The cross-section area of the flue is likely to prove the most common difficulty. Usually this cannot be seen from inside the fireplace, because of the narrow throat and the smoke chamber which in

some form may be above the shelf. If, therefore, the apparent essentials — such as shape of opening, narrow throat across the whole width, and preferably the slanting back — have been followed out it would be well to determine the area of the flue itself. To do this it will be necessary to reach the top of the chimney and, by lowering a weight on a line, find which flue leads to the fireplace in question. Its area at the top will in all probability be its area throughout. If the flue happens to be the only one in that particular chimney it may sometimes be determined more easily by counting the bricks in its two horizontal directions and in this way estimating what would probably be the inside flue. This conclusion is by no means sure, however, since the chimney may be built with eight-inch walls or it may be simply a four-inch wall with

the flue lining. To one with a knowledge of bricklaying, however, the way in which the chimney is laid up will usually indicate the size of the flue.

Having determined the size of the fireplace opening and the cross-section area of the flue itself, it will in many cases be found that the latter is too small for the former. The easiest way to remedy this difficulty naturally would be to decrease the size of the opening in the face of the fireplace. In order to check up the diagnosis, however, it would be well to fit a pair of thin boards to wedge fairly tightly into the opening at the top, one of which boards could be drawn down past the other one so that the fireplace opening may be decreased anywhere from six to twelve inches in height — using two six-inch boards. By testing the fireplace in action in this way it will be readily de-

termined by what amount the opening must be decreased. The boards then being removed, a wrought-iron curtain or decorative projecting hood of wrought iron or copper may be fitted permanently to the front.

It is possible, however, that the opening of the fireplace and the flue area are properly related, in which case it may be found that the trouble is due to the lack of a narrow throat and smoke shelf. This too could be constructed in the fireplace without disturbing anything outside, such as the mantel or chimney breast, unless the fireplace is not large enough to permit the addition of four inches of brick at the back. If it is not, it will be well to examine carefully the thickness of the wall at the back of the fireplace and if this is sufficient, part of it could be taken away where the slope of the back

joins the upright wall — about a foot above the hearth surface — and the sloping back built in from there up to form the throat. Or, to make perfectly sure of the result, the mantel itself could be removed — this is usually merely nailed to the plaster — and enough of the chimney breast taken down to permit the introduction of a cast-iron throat damper.

FIREPLACE ACCESSORIES

JUST as a turkey dinner depends largely for its success upon the "fixin's," so the fireplace is in itself incomplete without its andirons and tools. To begin with the most nearly indispensable appurtenances, we must name the andirons — or, if the fuel is to be coal, then the basket grate. I have wondered sometimes why the philosophers have not hit upon the andiron as a particularly fitting subject for pleasurable rumination. There are so few things which combine to such a degree the purely utilitarian with the eminently decorative qualities. Most things which do combine the two in any real measure have been developed on the side of one at the expense of the other quality. Take man's dress coat, for ex-

ample, the cut-away front of which, with the two buttons at the back, was designed to permit the gentleman to loop the skirts up to his waist when he mounted his horse. Or, take the modern lighting fixture with its little pan still waiting to catch the drip of the tallow beneath the flame, which has long since been displaced by gas tip or incandescent filament. How few things there are, after all, which ages ago — probably through a long evolution — were designed to meet a real need in the best possible manner and which still meet that need and combine true beauty with their usefulness. The wrought-iron shoe of a horse occurs to us, perhaps a ship's anchor, a string-bow or an axe helve.

Some support is needed to raise the fuel so that the air may find a clear passage under and through it to the flames, and nothing could well be devised to serve

the purpose better than the pair of horizontal wrought bars, each with its single rear foot and its steadying front, the upper continuation of which serves to hold the burning logs in place.

One is not likely to go wrong in making a choice of andirons for any given type of fireplace. The simply turned brass patterns belong so obviously to the Colonial brick opening with its surrounding white woodwork; the rougher wrought-iron types are so evidently at home in the craftsman fireplace or the rough opening of stonework, that misfits are hardly possible.

Fortunately the old brass andirons of Colonial days have proven themselves fitted to survive, and many of them are still to be found in old cobwebby attics or in the more accessible shop of the dealer in antiques. One of these confided to me his

The good old dependable Colonial type, with its simple brick facing framed by the delicately detailed white wood mantel

way of distinguishing the really old andirons from artificially aged reproductions: the old ones have the turned brass of the front post held in place by a wrought-iron bar that attaches to the horizontal member by a screw thread on the bar itself; on the modern examples this upright bar is drilled with a threaded hole into which an ordinary short screw engages through a hole in the horizontal member.

Next after the andirons in importance are the tools — the three most nearly essential ones being the poker, tongs and shovel. There is no need of saying that these should harmonize with the andirons and preferably be of brass if they are of brass; wrought iron if the andirons are of wrought iron. There are two ways of taking care of them — the ordinary method of using a stand which, if the tools are bought together, will prob-

ably come with them; or in some of the fireplace types where the whole chimney breast is of brick, concrete or stone, sometimes a combination of three or more hooks is wrought in the same metal as the tools and fixed securely in the chimney breast at the side of the opening.

A brush for the hearth, although not so frequently seen, is exceedingly useful in sweeping back the ashes and small embers. Then there is the time-honored bellows, now hardly more than an ornament, for with a scientifically built fireplace it should never need to be called into action.

A screen of some sort comes nearer to being classed with the necessities than with the merely decorative accessories, for it is hardly safe to leave a fire or even the smoldering embers without some protection against the damage that is so

quickly caused by sparks. The usual type of screen is the woven wire one in several forms. Probably the most convenient type is that made up of a number of flat sections which fold upon one another into a compact mass which will not be in the way when not in use. In recent years, however, there is another sort of screen that is coming to be regarded with very high favor and that is the screen made up of glass in combination with other materials. There is the simple French screen of glass panes in a gilded frame, and there are wonderful possibilities for the employment of the craftsman's skill in combining with plain or lightly tinted glass more decorative features in the way of stained glass and leading or in the combination of glass and metals.

The design of a fire screen depends, of

course, on the purpose it is intended to serve. If it is desired to secure a screen that will cut off the heat but not the light of the fire, the craftsman will work with larger areas of clear glass. On the other hand, it may be felt desirable to make a nearly opaque screen to cut off both light and heat. These, of course, are usually small rectangles on some sort of a pedestal and are not intended to take the place of spark screens.

A wood receptacle of some form is a convenient accessory, as one will avoid the task of carrying fuel up from the cellar or in from the woodpile whenever a fire is desired. There is a broad field from which to choose — brass-bound boxes of many sizes and forms, sturdy baskets and the metal wood baskets which are made for holding the logs themselves. There are those who prefer not to en-

cumber the vicinity of the fireplace with these rather bulky receptacles, but who find it convenient to have a box built in near by in the form of a window-seat or perhaps as a part of built-in bookcases. Two or three houses that I have known had a very simple rough dumbwaiter running from the cellar up into a window-seat. This could be loaded with fuel, hoisted into position and locked there until the fuel was needed.

There are two other fireplace accessories that we must not overlook, and these are the crane and the trivet. The crane is a very picturesque feature in a fireplace that is large enough to hold it comfortably, but it does seem unfortunate that in a great many fireplaces the crane is dragged in with the idea of making it a decorative feature but without any expectation of putting it to practi-

cal use. There are fireplaces — in a summer camp, for example — where a crane could be put to good use. Used elsewhere it is too often merely an affectation.

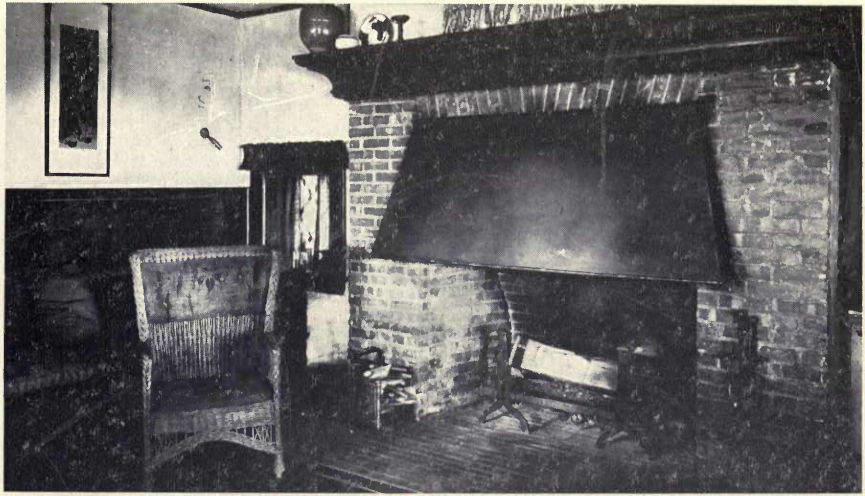
The trivet is not nearly so well known as the crane and yet it might be put to use in a modern fireplace much more frequently. In England it is found in various ingenious forms, most of which show, however, some form of low stool which is stood upon the hearth, as near as may be convenient to the fire, to keep warm a teakettle or perhaps even a plate of toast. There are some rather interesting antique brass trivets to be found in many of the larger antique shops.

BUILDING THE FIRE

I HAVE no doubt that the majority of the readers who have patiently found their way thus far through this little book will feel like closing it with a sigh of impatience at the sight of the chapter heading above. "Who doesn't know how to build a wood fire? We might as well seek instruction as to the most approved method of striking a match!" But if you will bear with me for a moment I would say most emphatically that as a matter of fact very few people really do know how to build a fire. It is easy enough to assemble a bunch of newspapers, twigs, kindling and logs so that it is possible to *start* a fire, but perhaps you have noticed that while many fires are kindled few burn out. If you are

seeking for the greatest amount of comfort and enjoyment from your wood fire you will secure it only by sitting at the feet of that greatest of all teachers, experience, or perhaps more quickly by experimenting a bit with one or two of the simple expedients which I shall try to show are based on the wood fire's way of working. While there are those who would not for worlds give up the pleasure of tinkering with the tongs and poker while the fire burns, it will perhaps not detract from this enjoyment if the tinkering is not actually the result of necessity to keep the logs burning. Fire-mending is a delightful recreation only when it is not imposed upon us by becoming an alternative to having the glowing embers become discouraged and give up the fight.

First of all, there is the need of hav-



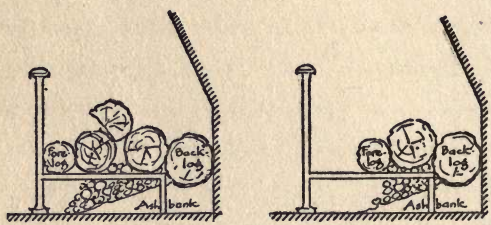
There is a splendid opportunity for home craftsmanship of a high order in making the copper hood for an example of this type

ing fuel that is really dry. It is not essential that the woodpile be kept indoors, but it should at least have shelter above it and on three sides. The woodsheds of New England farmhouses offer a practical and efficient solution of the problem. Usually you will find these as an extension to the house, a shed open only to the south, in which the cord wood is piled neatly to the roof with sawn ends to the front. Two long logs are laid on the floor or ground, at right angles to the firewood, so as to encourage a circulation of air for drying.

In addition to the heavier logs which are cut to fit the fireplace opening, there should be almost an equal quantity of twigs, brush and smaller pieces, or else split kindling, to serve as starting fuel.

To lay a fire on the hearth, select first a heavy log which should be placed close

against the back of the fire chamber on the hearth and not on the andirons. This is the traditional "backlog." It will serve through several fires and is intended mainly as a protection of the back brickwork. Stand the andirons with their



Section showing the arrangement of andirons and wood for a large fire (at the left) and a smaller one

rear ends close up against the backlog, and if the latter is of the best size its top will be well above the horizontal bars of the andirons. Now select a smaller log — preferably not a split piece — and lay it across the andirons. If a big

fire is desired, keep this log — the "fore-log" — well to the front, just back of the andiron upright posts, leaving plenty of space between backlog and forelog for the main body of the fire. The distance between these two logs will govern the size of the fire. In this space put a few crumpled sheets of newspaper, some of the lighter twigs and small branches, and one, two or three logs or split pieces, as may be required to fill the space. The diagrams will make clearer this arrangement for a small fire or a large one.

As the central portion of the fire burns away, keep the forelog pushed back against it, unless a less active fire is desired. It is well to remember that where one isolated log will not burn, two close together probably will, and a pyramid of three will do still better.

Many fireplaces show a tendency to

smoke only when first lighted; this is probably due to a cold chimney, and can usually be prevented or made less objectionable by burning a newspaper just under the throat, thus starting the proper action of the up and down drafts.

If it is possible for us to choose between various kinds of wood for our open fire fuel there is opened up one of the most interesting phases of the whole subject. To most people probably a wood fire is a wood fire, whether the logs be of cherry wood, pine, hickory or anything else. For the wood fire connoisseur, if we may call him by that name, there is no difficulty whatever in telling with a glance at the fire just what wood is burned. The crackle and explosive nature of hickory, the hiss of pine, the steady flame from cherry, the hot and rapid disintegration of sycamore, and the

A simple and exceedingly effective recessed design in brick and rough plaster. The hearth is raised above the floor

steady and thorough combustion of soft apple wood soon become familiar characteristics to those who have the opportunity to lay the fire in variety. Then there is, of course, the fascination and the weird coloring in a driftwood fire — most spectacular of all but unfortunately denied to most of us.

Finally, the most important factor of all in the management of a wood fire is an ample bed of ashes for its foundation. It is impossible for anyone who has not actually tried fires both ways to appreciate the immense advantage that a bed of wood ashes gives. It unquestionably doubles the fire's efficiency in throwing heat out into the roon it halves the care and attention needed to keep the fire burning, and it increases beyond measure the beauty of a wood fire, when it is nearing its end, by rekindling itself with the

embers and keeping alive for a long time the quiet, dull red glow. Stop your ears to the importunities of the over-zealous housekeeper and steel yourself against the pricks of the conscience of cleanliness. If need be, fight for the retention of that bed of ashes. You can scarcely get it too large or too deep. The accumulation of two years is a priceless treasure. One of my own fireplaces has a bank that has to be depleted about twice a year to make room for the fire. A peck or two of the fine white powder is then carried out to bring joy to the rose garden.

To one who loves a wood fire and knows its possibilities the mention of such a thing as an ash-drop is as a red flag to a bull. Peace be to the ashes of the man who invented this easy method of robbing the hearth of half its charm. May he be forgiven it.

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